1004-II-20 Changes of the Levels of Secretory Type II Phospholipase A2 in Patients With Coronary Artery Disease Undergoing Percutaneous Coronary Intervention
Pye-Hern Liu, Yi-Heng Li, Wei-Chuan Tsai, Ting-Hsing Chao, Shi-Hong Chan, Liang-Min Tsai, Jyh-Heng Chang, FACE. National Chung Kung University Hospital, Tainan, Taiwan, ROC.

Background: A2 phospholipases are a family of enzymes that can hydrolyze phospholipids at the sn-2 position to generate lysophospholipids, and precursors of various pro-inflammatory lipid mediators including leukotrienes, prostaglandins, and platelet-activating factors. They might be involved in modifying plaque in the artery wall and presented as prognostic factors. The circulating levels of secretory non-pancreatic type II phospholipase A2 (sPLA2) are increased in various chronic inflammatory diseases, including coronary artery disease (CAD). These inflammatory markers, as C-reactive protein (CRP) or sPLA2, may play a role in the pathogenesis of acute coronary syndrome with the rupture and inflammation of an atherosclerotic arterial plaque. The present study was designed to evaluate the changes of the levels of sPLA2 and other markers after mechanical plaque rupture by percutaneous coronary intervention (PCI) in CAD patients.

Methods and Results: Plasma levels of sPLA2 and CRP were measured in 61 consecutive patients with CAD by enzyme-immunoassay. Five serum samples were measured. They are: (1) before diagnostic angiography, (2) after diagnostic angiography, (3) after PCI, (4) 24-hours after procedure and (5) 48-hours after procedure respectively. The sPLA2 levels didn't change after the procedures of diagnostic angiography (207 ± 125.4 mg/dL vs. 201.9 ± 124.8 mg/dL, p = 0.7) and neither did the serum CRP levels (6.0 ± 7.4 mg/dL vs. 4.4 ± 4.7 mg/dL, p = 0.1). The levels of sPLA2 significantly increased after the coronary intervention (212.3 ± 48.9 mg/dL vs. 430.3 ± 277.4 mg/dL, p = 0.0001). The levels of CRP didn't rise immediately after PCI but elevated significantly later at 24 hours after intervention (5.02 ± 6.62 mg/dL vs. 13.43 ± 16.1 mg/dL, p = 0.02).

Conclusion: Data from the present study showed that the procedure of PCI might result in immediate elevation of circulating levels of sPLA2 following the mechanical disruption of coronary plaque. The CRP levels didn't rise immediately but increased significantly until 24-hours after PCI. These results strongly suggest that sPLA2 plays as a pro-inflammatory factor and may contribute in the pathogenesis of acute coronary event.

POSTER SESSION

1005 Optimizing Stent Results
Sunday, March 17, 2002, 9:00 a.m.-11:00 a.m.
Georgia World Congress Center, Hall G
Presentation Hour: 9:00 a.m.-10:00 a.m.

1005-2 Late Angiographic and Clinical Findings After Elective Placement of the Penta Stent: Results From the PENTA Stent Registry
Jeffrey J. Pogum, David Cox, Narn Farnat, Mark Moei, Alex Sicomroy, James Heimer, Jeffrey Werner, Marina Sievers, Stan Fink, Tom Linnemeier, Brigham and Women's Hospital, Boston, Massachusetts.

Background: The MULTI-LINK PENTA coronary stent is the fifth generation MULTI-LINK® stent that provides enhanced flexibility, conformability, deliverability, scaffolding, and radiopacity over prior generations of stents, in part, due to its variable thickness struts (11/16 stent thickness, 300-280-304-316}. Methods: 262 patients with ischemic coronary artery disease at least one stenosis > 50% in a native coronary vessel were treated with a single coronary intervention using the PENTA stent. Demographics included: age, 62.0 years, men 65.5%, diabetes mellitus, 19.6%. The primary clinical endpoint of the study was the occurrence of a major in-hospital adverse cardiac event (MACE) including death, myocardial infarction, or urgent revascularization using PTCA or CABG. The primary angiographic endpoint was binary restenosis (>50% follow-up diameter stenosis). Results: The mean age was 62.0 ± 10 years and 123 were male (74.1%). The clinical, angiographic and procedural characteristics of Group 1 were as follows: mean age was 70.4 ± 4 vs. 60.6 ± 4, p = 0.03) or in clinical and angiographic characteristics between the two groups. Stent utilization was 0% vs. 14% (p = 0.0001) for Groups 1 and 2 respectively. Major adverse events rates for Groups 1 and 2 were similar (65% vs. 91%, p = 0.1), post M1 minimal lumen diameter was superior for group 1 (2.7 ± 0.6 mm vs. 1.9 ± 0.7 mm, p = 0.05). In-hospital mortality (0% vs. 7.3%, p = 0.03) and in-hospital MACE (death, G-Wave MI, and emergency CABG) 0% vs. 7.3%, p = 0.01) were lower for Group 1. At 2 years follow-up, Kaplan-Meier analysis demonstrated no significant difference in mortality (15% vs. 18%, p = 0.39), MI (6% vs. 8%, p = 0.30), or CABG (8% vs. 9%, p = 0.84) between both groups. However the need for repeat PCI was lower in Group 1 (9% vs. 24%, p = 0.007: see Figure).

Conclusion: The use of coronary stenting in the very elderly resulted in significant decreases in major in-hospital complications and in the need for repeat PCI at 2-years follow-up.